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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,203	09/10/2003	Joy Sawyer Bloom	AD6930 US NA	5565

23906 7590 02/18/2005

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WILMINGTON, DE 19805

EXAMINER
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WOODWARD, ANA LUCRECIA

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/659,203

Applicant(s)

BLOOM, JOY

Examiner

Ana L. Woodward

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 3/3/2004, 5/24/2004
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6-8 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☒ Claim(s) 1-9 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/3/04, 5/24/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1 and 6-9, drawn to a four-component composition, classified in class 524, subclass various.
  - II. Claims 2-9, drawn to a five-component composition, classified in class 524, subclass various.

2. The inventions are distinct, each from the other because:

Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a composition in and of itself without the presence of an additional ingredient which would react in-situ to produce a mutually exclusive final product and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

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3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

4. Claims 1-9 are generic to a plurality of disclosed patentably distinct species comprising the various materials embraced by the thermoplastic component. The election of an ultimate species definitive of said thermoplastic component is requested. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

5. During a telephone conversation with Ms. Tamera L. Fair on February 15, 2005 a provisional election was made with traverse to prosecute the invention of group I comprising polyimide as the preferred species definitive of the thermoplastic component, claims 1 and 6-9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 2-5 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Objections***

6. Claim 9 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend upon another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claim 9 has not been further treated on the merits.

***Claim Rejections - 35 USC § 112***

7. Claims 1 and 5-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is unclear as to whether the recited percentages are based upon the sum total of thermoplastic material and fillers, based upon only the sum total of the fillers or based upon the whole composition.

In claim 8, it is unclear if or how the term “preferably” limits the claimed subject matter.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 5,789,523 (George et al) in view of U.S. 5,576,358 (Lem et al).

George et al disclose a polyimide composition with improved wear resistance and reduced coefficient of friction. The composition comprises from 70-99.9 weight percent of at least one polyimide and from 0.1-30 weight percent of at least one sheet silicate, such as mica.

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The composition can further include up to 60 weight percent other additives, fillers and dry lubricants. In particular, the incorporation of graphite into the composition can extend the range of its utility as a wear resistant material. Another beneficial additive is carbon fiber for the purpose of reducing coefficient of thermal expansion (column 3, line 66-column 4, line 8). Example 29 discloses a polyimide composition comprising 5 weight percent mica, 57 weight percent graphite and 5 weight percent carbon fiber. Said composition is governed by a coefficient of friction range of 0.06-0.13.

In essence, the example of George et al differs from the present claims in the high content of graphite used. It is maintained that it would have been obvious to one having ordinary skill in the art to have employed the graphite in lower contents falling within the scope of the present claims because the additive can be used in an amount of up to about 60 weight percent based upon the total weight of the composition. In this regard, notice is made of the lower graphite contents used in examples 21 and 22. Accordingly, absent evidence of unusual or unexpected results, no criticality can be seen in applicants' claimed graphite content.

As to claims 7 and 8, while George et al do not expressly disclose the length of the carbon fibers, it is maintained that by being silent relative to the size of the carbon fiber, patentees' general disclosure implicitly suggests that any conventional size of carbon fiber can be suitably used with the reasonable expectation of success. In this regard, attention is directed to the similar-such disclosure of Lem et al, which teaches that chopped carbon fibers usually have fiber lengths of greater than 0.01 cm (equivalent to about 0.004 inches or 0.1 mm).

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***Prior Art***

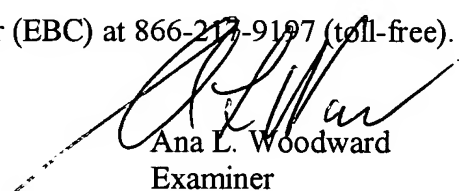
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana L. Woodward whose telephone number is (571) 272-1082. The examiner can normally be reached on Monday-Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ana L. Woodward  
Examiner  
Art Unit 1711

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